



## Analyzing the Value of Social Interaction for Fitness Center Management: The Influence of Service Encounter in Consumer Trust and Loyalty

### Authors' contribution:

- A) conception and design of the study
- B) acquisition of data
- C) analysis and interpretation of data
- D) manuscript preparation
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### Abstract

Previous investigations in fitness centers have indicated that interaction between customers and staff members play a crucial role in the service delivery process, being a source of value creation that can influence customers perceptions and behavioral intentions. However, despite available research demonstrating the influence of this variable on economic value and repurchase intention in these facilities. Evidence on how interactions between members and staff influence users' feelings is lacking. For this reason, the purpose of this study was to analyze the relationships among service encounter, consumer trust, and members loyalty in fitness centers. Data were collected by means of an on-line questionnaire surveyed to a total of 235 active users from different fitness centers across Portugal. Data analysis procedures included a Confirmatory Factor Analysis (CFA) followed by the development of a structural equation model (SEM). The results of the analysis demonstrated good psychometric properties. In addition, significant relationships were found between service encounter and consumer trust as well as between consumer trust and loyalty. However, service encounters did not influence significantly consumer loyalty. These results provide empirical evidence of the role of customer-employee interactions as a source of intangible value (i.e. emotional and social) creation in fitness centers. These interactions can be a source of value-in-use that can lead to other positive outcomes for managers, customers and staff members in these facilities.

**Keywords:** service encounter; consumer trust; loyalty; fitness center, sport management

### Introduction

Despite its relative youth, the fitness industry stands for its significant role within the sports market (García-Fernández & Gálvez-Ruiz, 2021). According to the 2024 European Health & Fitness Market Report, elaborated by Deloitte and Europe Active, by the end of 2023 the fitness industry generated an income of 31.8€ billion in Europe, surpassing the revenues pre COVID-19. In addition, the number of memberships in this industry also

increased by 7,5%, reaching a total of 67.6 million active members. According to Thompson (2022), during the last decades fitness centers have become a prominent industry in the sector of sport services. Furthermore, these facilities have become one of the main alternatives for leisure and recreation as suggested by Andreasson & Johansson (2014), who indicate that a 10 to 15% of the population in western countries attend regularly these facilities.

In fitness centers, services are produced and consumed by the members of these facilities via encounters with

employees (Chiu et al., 2020; Wang & Chiu, 2023). In addition, these facilities are featured by the high frequency of interactions between the staff and the members of its centers (Wang & Chiu, 2023), who not only interact on the purchase act but on a day to day basis, as fitness instructors may interact with costumers to instruct them directly in group activities or guiding users about their training plans as well as the performance of different exercises (Campos et al., 2017). Thus, customer-employee interactions play a significant role in the service delivery in these facilities (Wang & Chiu, 2023). More specifically, staff-customer interactions have been recognized as a key element for customers' service experience in the context of fitness services, which also influences patronage, membership renewal and loyalty (Chelladurai & Chang, 2000). Consequently, service encounter is arguably a critical variable to impact consumers behavior due to the high level of interaction between service providers and customers in this setting (Chiu et al., 2014; Hsieh & Chuang, 2020; Lin, 2019; Wang & Chiu, 2023).

Previous investigations (Wang & Chiu, 2023) have demonstrated that, in fitness centers, service encounters (SE) can influence perceived value (PV). Moreover, SE can also influence members repurchase intention through PV. However, despite demonstrating the effect of service encounter on some behavioral consequences, as well as some empirical evidence for these relationships, previous investigations (Wang & Chiu, 2023) did not account for the effect of alternative constructs such as consumer trust as antecedents of these variables. These new relationships seem to be logical given that, as indicated by Wang & Chiu (2023), service encounters have the potential to create an hedonic experience for customers during the service delivery process leading to developing positive feelings towards the service provider (Azza & Norchene, 2017). Given the unique features of fitness services, this study aimed to analyze the impact of service encounter on consumers' trust perceptions and loyalty behaviors in fitness centers to address this existing gap in literature.

Consequently, the purpose of this study was to examine the influence of service encounter on consumer trust and loyalty. For the aim of the study, the service-dominant logistic (S-D logic; Vargo & Lusch, 2004, 2008), the Sport Value Framework (Woratschek et al., 2014) and Commitment-Trust theory of relationship marketing (Morgan & Hunt, 1994) were used as the main theoretical lenses.

## Literature Review and Hypothesis Development

### Service-dominant Logic and Sport Value Framework

In 2014, Woratschek et al. (2014) published the sport value framework (SVF), a general theory aimed to pro-

vide a new logic to understand research problems in the context of sport management (Gerke et al., 2020). This new framework, which is based on the Service-Dominant logic (Vargo & Lusch, 2004), emphasizes the roles of customers and service providers in value co-creation through the sport service delivery (Woratschek et al., 2014). According to the SVF, consumers are regarded as central actors in sport services as they have the dual role of contributors and beneficiaries in the process of value co-creation (Jones & Byon, 2020). Since the SVF was proposed, researchers have increasingly applied it as the theoretical lens to explore how multiple stakeholders contribute to value co-creation in sport services in different contexts such as sport events (Buser et al., 2022; Daigo & Filo, 2022; Doyle et al., 2021; Jones & Byon, 2020); non-profit sport clubs (Behnam et al., 2021) or even fitness centers (Chiu et al., 2019; Wang & Chiu, 2023).

In fitness centers, member-staff interactions have been identified as a critical element for the value co-creation process, which can shape customer experience (Glaveli, 2021; Glaveli et al. 2023), as service experience in these facilities require the delivery of specialized knowledge and skills through several social interactions between users and staff members in order to create successful service experiences (Kim, 2022). This means that positive and frequent interactions between customers and service providers can contribute to value creation in the service delivery process (Delia et al., 2022; Thompson, 2022). This fact has been proven by previous investigations. For example, Behnam et al. (2021) found that customers with knowledge and skills showed higher levels of engagement which led to a higher level of relationship quality and loyalty towards fitness centers. Similarly, Chiu et al. (2019) demonstrated the positive impact of customers' active behaviors on perceived value in fitness centers.

In a similar vein, a recently published study by Wang & Chiu (2023) showed a direct relationship between service encounter (SE), perceived value (PV) and repurchase intentions (RI) in fitness clubs. In addition, this investigation also revealed the role of PV as a mediator in the relationship between SE and RI. Therefore, the available studies provide evidence on the contribution of SE to value creation in fitness services and how the interaction with the service contributes to repurchase behavior. However, this evidence seems limited as it does not take into account the possible contribution of alternative constructs such as consumer trust.

In this respect, earlier research indicates that fitness centers can be considered as environments characterized by a high perceived risk and/or uncertainty (mainly related injuries and health issues) as gym members often lack sufficient knowledge to work-out autonomously (i.e. how to train, what exercises to do, etc.) at the beginning or until a reasonable period of time has elapsed (Glaveli

et al., 2023). According to complementary theoretical lenses, such as the relationship-orientated marketing paradigm, it could be argued that service encounter could lead to the development customer trust, which could also influence customers future intentions (Brown et al., 2019; Glaveli et al., 2023). Therefore, this study aimed to address this research gap in the extant literature. In the following sections, we describe the main variables involved in the study and provide theoretical justification to propose the hypothesized relationships.

### Service Encounter

Foundational studies have defined service encounter as “the dyadic interaction between a customer and a service provider” (Surprenant & Solomon, 1987, p. 87). This construct, applied to the context of fitness centers, can be understood as the interactions that occur between the consumers and employees during the service provision. These service encounters are regarded as critical elements creating value in the service delivery process for different reasons (Font et al., 2021; Hsieh & Chuang, 2020; Wang & Chiu, 2023). On the one hand, users of fitness clubs experience many interactions and contacts with multiple employees, such as group fitness instructors, personal trainers, managers or front desk staff, among others. These interactions constitute a core element of the service delivery process as these staff members are responsible to guarantee a safe exercise experience as well as to make it pleasant while helping these users to achieve their personal goals (Hsieh & Chuang, 2020; Larivière et al., 2017). On the other hand, the frequency of customer interactions with service providers in gyms is significantly higher compared to other service contexts due to the high visit frequency of costumers to these facilities, which implies that these services need to be very reliable in service provision (Chiu et al., 2019; Glaveli, 2021; MacIntosh & Law, 2015; Yi et al., 2021).

According to the SD logic as well as the SVF, customers are value creators that actively participate in the value co-creation process (Vargo & Lusch, 2004; Woratschek et al., 2014). Therefore, service environments facilitating continuous interaction can be regarded as a suitable platform for value co-creation (Ramaswamy & Ozcan, 2018). Moreover, due to the high frequency of interaction in fitness centers as well as for intrinsic characteristics of the experiences in these services, service encounter can shape customers’ perceptions and actual behaviors (Behnam et al., 2021; Gruner & Homburg, 2000; Ramaswamy & Ozcan, 2018).

### Consumer Trust

According to Glaveli (2021, p. 153), customer trust in the service provider can be described as “their confidence in its goodwill, truthfulness, and capability to

operate in the best interests of the relationship in question”. According to Glaveli et al. (2023) CT in the service provider is a relational variable which is usually defined in terms of two different subdimensions: reliability (the ability of an organization to meet its promises) and integrity /benevolence (confidence on the goodwill to act in the best interests of the customers). These features highlight the expectedness of the behavior of the organization which comes from a learning process founded upon experience. (Glaveli et al., 2023). Following a relationship-orientated marketing paradigm, trust can be seen a key relational variable as it is grounded in the experiences of the user with the service and it has clear influence on the perception of other variables and attitudes such as satisfaction or loyalty (Glaveli et al., 2023; Loranca-Valle et al., 2021; Sirdeshmukh et al., 2002).

### Loyalty

Seminal works in the sport management literature refer to customer loyalty as a favorable attitude and consistent purchase behavior towards a particular brand (Wilkie, 1994). Historically loyalty has been studied from a behavioral perspective focusing mainly on repeat buying, frequency of consumption and length of relationship, or different combinations of these indicators (Bodet, 2008; Homburg & Giering, 2001). However, different authors have agreed to consider that consumer loyalty is defined as a bidimensional concept which gathers a behavioral and an attitudinal dimension (Dick & Basu, 1994; Mahony et al., 2000). In the context of fitness centers most of the investigations have focused on the attitudinal dimension of this construct, which has been regarded by some authors as customer’s more favorable attitude towards the sports and fitness center in terms of recommending the center and its services and demonstrating positive repurchase behaviors (e.g. renewal membership) (Nguyen, 2024; Yoshida & James, 2010). This variable is upmost relevance in this setting as higher levels of loyalty will influence consumption (e.g. membership dues, lesson fees), which constitutes a major income source for these facilities (León-Quismondo et al., 2020; Yi et al., 2021). In addition, customer retention in retail services can generate additional revenue opportunities via upselling (selling premium services to existing customers) and cross-selling (selling complementary services to existing customers) (Ferreira-Barbosa et al., 2020; Ferreira-Barbosa et al., 2024; Wang & Chiu, 2023).

### Relationship Between Service Encounter and Consumer Trust

According to previous research, frequent interactions between members and employees can serve different customers’ needs, which can boost the perceptions of the users about the service and foster customer repurchase

intention (Kim, 2022). Consequently, service encounter can shape users' perception of different elements of the service, influencing their future behavior. Previous investigations (Azza & Norchene, 2017; Wang & Chiu, 2023) have demonstrated that these facts are true in the fitness industry. For example, Wang & Chiu (2023) demonstrated that service encounter had a positive effect over perceived value and repurchase intention on a large ( $n=806$ ) sample of Taiwanese fitness centers. According to the results of this study, service encounter had a positive influence over both perceived value (economic) and repurchase intention. These results provided empirical evidence on the impact of staff-customer interactions (i.e. service encounter) on customers' perceptions and behaviors, identifying the critical role of perceived value as a mediating mechanism.

Nonetheless, one possible flaw of this investigation could be that the measurement of perceived value in this investigation is limited to the economical aspect of this variable. This represents a potential limitation as in spite of clearly representing the construct of perceived value as the consumers comparison between the tangible aspects of the service (i.e.: perceived benefits and costs), the instrument used by these authors cannot fully capture the intangible and emotional aspects of this variable (Sevilmiş et al., 2024). This element is quite relevant in this context as fitness centers can be seen as high risk and uncertainty environments (Glaveli et al., 2023). On this behalf, this user perception of risk can be reduced by positive and frequent interactions with the service provider, which can induce positive perceptions to customers about the trustworthiness and integrity of the service provider, generating consumer trust in the service provider (Ioannou & Melanthiou, 2015). On this basis, we propose the following hypothesis:

H1. Service encounter positively influences consumer trust.

### **Relationship Between Service Encounter and Consumer Loyalty**

Current scientific evidence suggests that the quality and frequency of interactions between employees and customers in fitness centers constitute a key element in service (Azza & Norchene, 2017; Chiu et al., 2019; Glaveli, 2021; Larivière et al., 2017). According to Wang & Chiu (2023), positive interactions between customers and employees during service provision can cause customers to feel a sense of caring and respect, which leads to future engagement and repatronage. Likewise, if a service provider fails to deliver a service encounter successfully, customers are more likely to engage in negative behaviors, such as switching to a competitor or lodging complaints,

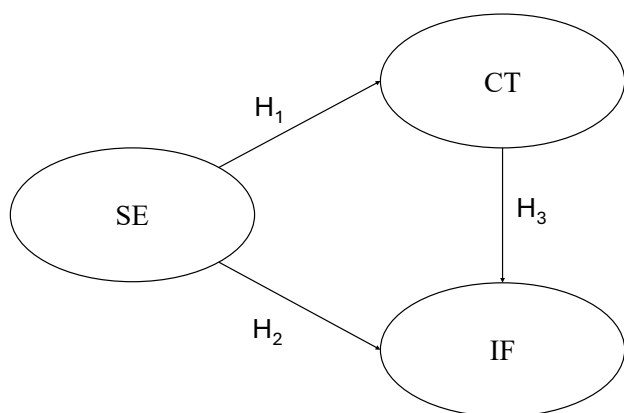
as their needs were not met during the service delivery (Xu et al., 2021). Therefore, interactions between staff and consumers can influence customer loyalty (Glaveli et al., 2023). This means that by frequently (and positively) interacting with service providers, staff may contribute to member retention (Delia et al., 2022; Thompson, 2022). This fact has been empirically demonstrated by previous investigations such as Behnam et al. (2021), who found that customers with knowledge and skills showed higher levels of engagement, which led to a higher level of relationship quality and loyalty towards fitness centers (Behnam et al., 2021). Similarly, Chiu et al. (2019) demonstrated that customers' active behaviors have a positive impact on perceived value in fitness centers. Previous investigation in this context have shown that service encounter can influence significantly some behaviors such as repurchase intention (Azza & Norchene, 2017; Wang & Chiu, 2023). Nonetheless, the empirical relationship between service encounter and consumer loyalty is still to be tested in this setting. Consequently, based on the available evidence we posit the following hypothesis:

H2. Service encounter influences consumer loyalty.

### **Relationship Between Consumers Trust and Loyalty**

Seminal papers in the field of service marketing have indicated that trust is the basis for loyalty in retail services (Berry & Parasuraman, 1993). This is grounded in some theories such as the Commitment-Trust theory of relationship marketing (Morgan & Hunt, 1994) which proposes that service provision between businesses and consumer can be seen as a type of "relational exchange". From this theoretical perspective, trust is a cornerstone for strategic partnerships as relationships featured by trust are so highly valued that these parties involved will desire to commit to these relationships (Sirdeshmukh et al., 2002). This is crucial as relational exchanges are built on the foundation of mutual commitment (Glaveli et al., 2023). In addition, the concept of commitment is very similar to attitudinal loyalty under this paradigm (Loranca-Valle et al., 2021). In fact, some researchers even define related concepts such as brand loyalty as "commitment to certain brand arising from certain positive attitudes" (Assael, 1992). Therefore, we propose that consumer trust will influence members loyalty. More specifically, it is established that building consumer trust through consistent interactions will lead to higher levels of loyalty as suggested by previous studies (Paschalidou et al., 2023; Sandell & Lagrosen, 2015). All the proposed hypothesis between service encounter, consumer trust and loyalty are presented in the conceptual model in Figure 1.

H3. Consumer trust in the service provider influences members' loyalty



Note: SE: Service encounter; CT: Consumer Trust; IF: Loyalty.

**Figure 1.** Conceptual model and hypotheses of the study

## Study Context

The fitness industry in Portugal represents an interesting market featured by the growth and diversification experienced during the last few years, which began with a notable recovery in 2022, following the downturn caused by the Covid-19 pandemic. That year, the number of fitness clubs grew by 10% and the number of members increased by 49%. In addition, revenue rose by 39%, and market penetration expanded by 2.2 percentage points compared to 2021. Notwithstanding, employment declined by 2.4%, driven by a 6.1% reduction in the number of instructors, which was not fully compensated by a 2.6% increase in non-instructional staff (Pedragosa et al., 2023).

In 2023, the industry continued its upward trajectory with an increment of 20% in the number of fitness centers compared to 2022, reaching a total of 1,056 facilities. Revenue continued to grow by 2.4%, reaching the figure €270 million, while the market penetration rate reached 6.9%. Although staff numbers remained stable, the number of instructors rose by 7.9%, resulting in an overall workforce growth (instructors and staff combined) of 4.5% year-on-year (Pedragosa & Ferreira, 2024).

Lastly, 2024 marked a turning point for the industry, as it surpassed the peak levels prior to the pandemic (in 2019). All key performance indicators reached record highs when compared to 2023: the number of fitness centers rose to 1,282 (up 21.4%), the number of members increased to 780,000 (up 10.1%), and revenue (excluding VAT) climbed to €345 million (up 27.5%). Market penetration approached 8%, narrowing the gap to the European average of 8.6% (EuropeActive, 2024). The number of instructors grew to 10,528 (a 7.7% increase), and the number of non-instructional staff rose to 8,212 (up 9.4%).

Overall, the fitness industry in Portugal is demonstrating strong, sustained growth, underpinned by a robust post-pandemic recovery, with 2024 figures exceeding pre-pandemic benchmarks (Pedragosa & Ferreira, 2025). In addition, the Portuguese fitness industry is also featured by the great variety and diversification of business models. Traditional fitness centers represent the most common center typology (80%) whilst personal training studios, crosstraining boxes, women gyms, and fitness boutiques represent the remainder business models according to the *Barómetro do fitness em Portugal 2022* (Pedragosa et al., 2023).

## Methods

### Procedure

For the aim of this study, an on-line survey was conducted from September 2023 to March 2024. Data collection was performed using a convenience sampling technique. In terms of the specific actions carried out for data collection procedure, first, the link to the questionnaire was sent to the managers of the Portuguese Association of Gyms and Fitness Centers (*Portugal Activo*), who distributed the questionnaire among their associated members (i.e. managers, directors, owners and CEOs from fitness centers and chains that were registered as active members of such organization). Then, these responsible persons emailed the link to access the survey to their active members through their centers' databases. Inclusion criteria for participation consisted of: (1) being aged 18 years or older and (2) being an active member of a gym or fitness center at the time of data collection.

### Measurements

The instrument employed for data collection was an on-line questionnaire consisting of four sections. First, a four-item scale was used to assess service encounters in fitness centers. This instrument, originally developed by Gruner and Homburg (2000) and adapted by Wang and Chiu (2023) to the fitness context, represents the extent to which customers perceive the intensity and frequency of interaction with employees (Wang and Chiu, 2023, p.153). Example items of the scale include "The staff of this fitness center frequently interacts with me" and "The number of fitness staff with whom I interact is high". Previous investigations have shown the scale has good psychometric properties, ensuring this a valid and reliable instrument (Hsieh & Chuang, 2020; Gruner & Homburg, 2000). Second, the four-item scale of Morgan (1994) was used to measure customers trust in the service provider. Sample items of this scale include "I feel I can trust my gym", "This fitness center is truly sincere in its promises", or "This club treats me fairly and justly". Similarly, to the

service encounter scale, this instrument has demonstrated being appropriate as previous studies have demonstrated that its psychometric properties are adequate (Glaveli et al., 2023). Third, consumer loyalty was assessed by Zeithaml's et al. (1996) scale, which has been extensively used to assess customers behavioral intentions in fitness centers (Alguacil et al., 2019, 2020; Çevik & Sevilmiş, 2024; García-Pascual et al., 2023; García-Fernández et al., 2018; Nuviala et al., 2014), proving its satisfactory psychometric properties in previous studies. These items evaluate different future behavioral intentions of fitness centers members (e.g., "I will make positive comments to a friend about the programs and services in this fitness center," "I would re-register in this fitness center if I ever had to cancel my membership"). All these survey items were measured on a seven-point Likert scale ranging from extremely disagree (1) to (7) extremely agree and adapted to Portuguese following a back-translation process (Brislin, 1970). For this adaptation, some minor modifications had to be made for the service encounter scale. Specifically, the word structure "entre os membros e os colaboradores" was included in items one and three to refer to the interaction between customers and staff members. In the case of consumer trust and loyalty, no major changes were made as item translation from English to Portuguese gave an equivalent meaning without adding extra wording. All the items in the original and translated versions are presented in Appendix 1. Finally, the fourth section of the questionnaire included a battery of sociodemographic questions aiming to identify the characteristics of the sample. These questions included sex, membership tenure, weekly attendance frequency, type of center in which they were enrolled, user profile and monthly fee that they were paying. For the monthly

fee classification as well as the typology of fitness center, the categories reported in the *Barómetro do fitness em Portugal 2022* were adopted as the reference (Franco et al., 2024; Pedragosa et al., 2023).

Given that all data were collected from the same source at a single point in time, a set of procedural remedies were adopted to alleviate potential concerns of common method variance (CMV) (Hulland et al., 2018). First, unambiguous terms and concise items were adopted from previous literature. Second, all the indicators for the survey were content analyzed by four sport management scholars from two different countries that had extensive experience in survey-based research. Thirdly, researchers aimed to reduce participants evaluation apprehension by adding a section in the preamble indicating that there were no right or wrong answers to the questions in the survey (Sato et al., 2016). Lastly, to protect participants' anonymity and reduce respondents' apprehensiveness further, this study used a web-survey design.

### Sample

A total of 235 people with a mean age of 41.51 ( $\pm 13.68$ ) years completed the questionnaire. Most of the participants were users of fitness centers (85%,  $n=200$ ), whereas the other 15% ( $n=35$ ) of users were members of boutique centers, personal training studios and CrossFit/cross training boxes among other types of centers. Most of these users attend two to five times (93%,  $n=219$ ) per week to either train on their own or participate in group activities (89%,  $n=209$ ). With regards to sex distribution, a large majority of the respondents were women (72%,  $n=179$ ). Finally, the majority of the respondents indicated paying a monthly fee between 30 and 65 € per month. The full sociodemographic profile of the participants can be seen in Table 1.

**Table 1.** Socio-demographic characteristics of the sample.

|              |                                     | Frequency | Percent |
|--------------|-------------------------------------|-----------|---------|
| Gender       | Women                               | 170       | 72%     |
|              | Men                                 | 65        | 38%     |
| Centre Type  | Fitness Boutique                    | 8         | 3%      |
|              | Box/ Cross Training                 | 8         | 3%      |
|              | Personal Training Studio            | 13        | 6%      |
|              | Women's gyms                        | 6         | 3%      |
|              | Health Club/ Fitness center         | 200       | 85%     |
| User profile | Group classes user                  | 94        | 40%     |
|              | Personal trainer user               | 18        | 8%      |
|              | Free user (free weights, cardio...) | 115       | 49%     |
|              | Swimming pool                       | 2         | 1%      |
|              | Outro                               | 6         | 3%      |

|                        |                           | Frequency | Percent |
|------------------------|---------------------------|-----------|---------|
| Monthly membership fee | Less than 30€             | 79        | 34%     |
|                        | Between 30€ and 65 €      | 138       | 59%     |
|                        | More than 65€             | 18        | 8%      |
| Membership tenure      | Less than 3 months        | 18        | 8%      |
|                        | Between 3 and 6 months    | 43        | 18%     |
|                        | Between 7 and 12 months   | 36        | 15%     |
|                        | Between 13 and 24 months  | 39        | 17%     |
|                        | More than 2 years         | 99        | 42%     |
| Attendance             | Less than once a week     | 7         | 3%      |
|                        | Once a week               | 5         | 2%      |
|                        | Twice a week              | 40        | 17%     |
|                        | 3x times per week         | 72        | 31%     |
|                        | 4x times per week         | 42        | 18%     |
|                        | 5x times per week         | 50        | 21%     |
|                        | 6x times per week         | 15        | 6%      |
|                        | 7x times per week or more | 4         | 2%      |

### Data analysis

Firstly, a confirmatory factor analysis (CFA) was performed to ensure the validity of the measurement model. Secondly, to test the proposed hypotheses, a causal relationship model was developed. These analyses were performed using the Maximum Likelihood method (ML) in JASP 0.19.1 software. Following Kline (2023), the following goodness-of-fit indexes were considered to analyze both the measurement as well as the structural relationships model: significance of the Chi-square ( $\chi^2$ ), the ratio between  $\chi^2$  and degrees of freedom ( $\chi^2/df$ ), Root Mean Square Error of Approximation (RMSEA), Standardized root mean square residual (SRMR), Goodness of fit index (GFI), Bentler-Bonnet Normed Fit Index (NFI), Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI). In addition, confirm the reliability and construct validity of the scales, Cronbach's Alpha, Composite Reliability (CR) and Average Variance Extracted (AVE) were analyzed. Finally, discriminant validity was tested using Fornell & Larcker (1981) and the Heterotrait-Monotrait Ratio (HTMT).

### Ethical Considerations

This investigation was conducted following the guidelines of the ethics committee from the University of Valencia, which granted ethical permission to the researchers through their ethics committee (2023-FIS-2837503). Firstly, a preliminary section was included at the beginning of the questionnaire indicating the purpose, benefits and possible risks of the study, participant's voluntary par-

ticipation as well as the right to revoke it. This text also informed participants about the anonymous processing of the data in accordance with the principles set out in Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 as well as the fundamental principles established in the Declaration of Helsinki (Trombert, 2015). Secondly, a contact person was provided for any participants who wanted to request further information in the final part of this preamble. Finally, a paragraph was included explaining to respondents that by clicking "next" they voluntarily accepted participation in the research and gave their tacit consent.

## Results

### Measurement Model

Overall, the results of the CFA confirm overall a good fit of the measurement model ( $\chi^2/df = 177/62$  [2.85],  $p < .001$ , RMSEA = .089 [90% CI .079–.105], SRMR = .03, GFI = .98, CFI = .97, TLI = .96, NFI = .95). Firstly, the  $p$  value associated with Chi-square ( $\chi^2$ ) was  $< .001$ , demonstrating the significance of the measurement model. Secondly, the ratio between  $\chi^2$  and its degrees of freedom ( $\chi^2/df$ ) was 2.85. According to Hu & Bentler (1999), a value of 1.00 in a measurement model would be considered perfect, while ratios below 2.00 would be considered a very good model fit, and values below 5.00 are considered acceptable (Hu & Bentler, 1999). Thus, based on the results of  $\chi^2/df$  on this analysis we could consider the proposed model as adequate. Thirdly, Goodness of fit index (GFI), Bentler-Bonnet Normed Fit Index (NFI), Comparative

Fit Index (CFI) and Tucker-Lewis Index (TLI) exceeded the 0.9 cutoff point (Hu & Bentler, 1999), showing optimal results. In addition, the RMSEA = .089 (90% CI .079–.105) revealed an acceptable, but marginal fit of the model (Glaveli et al., 2023; Hooper et al., 2008; Sharma et al., 2005). However, no error terms were allowed to be correlated in this model; and no items were shown to be particularly problematic. Moreover, Standardized root mean square residual was .03, below the recommended cut-off criteria of this indicator (.08) (Hu & Bentler, 1998).

To verify the reliability and construct validity of the scales, Cronbach's Alpha coefficients, Composite Reliability (CR) and Average Variance Extracted (AVE) were analyzed on the one hand. Convergent validity was analyzed by means of the t-values as well as the Average Variance Extracted (AVE). On the one hand, t-values for each item ranged from 12.77 to 19.26, satisfying the acceptable threshold ( $T > 3.291$ ) (López et al., 2000). In addition, AVE values of all constructs were higher than 0.50, supporting convergent validity.

Internal consistency reliability (see Table 2) was supported as the values of Cronbach's alpha and composite reliability were above the recommended value of 0.70 (Hair et al., 2022).

Discriminant validity was evaluated by Fornell-Larcker criterion and the heterotrait-monotrait ratio (HTMT) (see Table 3). First, the Fornell-Larcker criterion was fulfilled as the square root of the AVE of each construct was higher than inter-construct correlation (Fornell & Larcker, 1981). Moreover, the HTMT values between constructs were below the 0.85 cut-off value, demonstrating further evidence of discriminant validity (Henseler et al., 2015). Lastly, complementary to the procedural remedies to prevent CMV. Following Kaltsonoudi et al. (2022), we ran a new CFA merging all the indicators as a single factor following. The results of this analysis showed a very poor fit of the model ( $\chi^2 / df = 894/65$  [13.75],  $p < .001$ , RMSEA = .23 [90% CI .22–.25], SRMR = .09, GFI = .87, CFI = .75, TLI = 0.7, NFI = 0.73), indicating CMV was not a pervasive issue in this data set.

**Table 2.** Confirmatory factor analysis and reliability coefficients.

| Dimensions             |                                                                            | M (SD)        | Factor loading | t-value | $\alpha$ | CR  | AVE |
|------------------------|----------------------------------------------------------------------------|---------------|----------------|---------|----------|-----|-----|
| Service encounter (SE) |                                                                            |               |                |         |          |     |     |
| SE1                    | The interaction quality with this FC is higher than others                 | 5.19 ± (1.43) | .75            | 13.05*  | .91      | .92 | .73 |
| SE2                    | The staff of this FC frequently interacts with me                          | 5.54 ± (1.44) | .87            | 16.44*  |          |     |     |
| SE3                    | The frequency of encounters with fitness staff is high                     | 5.26 ± (1.39) | .89            | 17.20*  |          |     |     |
| SE4                    | The number of fitness staff with whom I interact is high                   | 4.92 ± (1.55) | .89            | 17.17*  |          |     |     |
| Consumer trust (CT)    |                                                                            |               |                |         |          |     |     |
| CT1                    | I feel I can trust my FC                                                   | 5.72 ± (1.21) | .89            | 17.12*  | .95      | .95 | .82 |
| CT2                    | This FC is truly sincere in its promises                                   | 5.51 ± (1.25) | .89            | 17.31*  |          |     |     |
| CT3                    | This FC treats me fairly and justly                                        | 5.79 ± (1.12) | .91            | 17.73*  |          |     |     |
| CT4                    | This FC is honest and truthful with me                                     | 5.69 ± (1.23) | .93            | 18.44*  |          |     |     |
| Loyalty (IF)           |                                                                            |               |                |         |          |     |     |
| IF1                    | I will recommend this FC to my friends and family                          | 5.56 ± (1.32) | .97            | 19.26*  | .95      | .95 | .81 |
| IF2                    | If other people ask me, I will speak positively about this FC              | 5.65 ± (1.25) | .95            | 18.81*  |          |     |     |
| IF3                    | I will encourage my friends and family to do sports activities in this FC  | 5.57 ± (1.35) | .97            | 19.36*  |          |     |     |
| IF4                    | I will consider this FC my first choice for any sports services I may need | 5.32 ± (1.41) | .85            | 15.31*  |          |     |     |
| IF5                    | In the coming years, I will be doing more sports activities in this FC     | 5.21 ± (1.34) | .75            | 12.77*  |          |     |     |

Note: \* $p < .01$ ; FC – fitness center; SE: Service encounter; CT: Consumer Trust; IF: Loyalty.

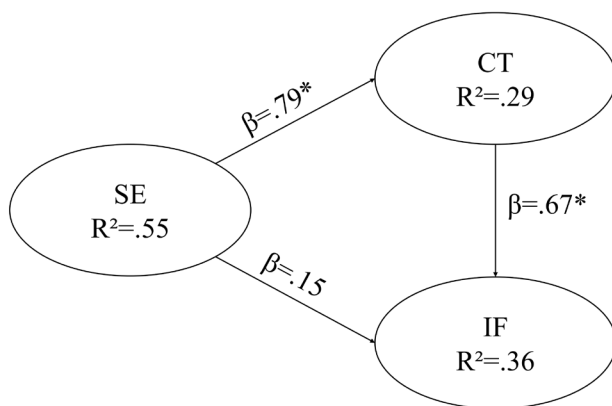
**Table 3.** Discriminant validity assessment

| Measures | 1    | 2           | 3           |
|----------|------|-------------|-------------|
| 1. SE    | 0.85 | <i>0.81</i> | <i>0.68</i> |
| 2. CT    | 0.74 | 0.9         | <i>0.79</i> |
| 3. IF    | 0.66 | 0.75        | 0.9         |

Note: *Italic values above the diagonal are HTMT values; Values on diagonal are the square root of AVE; values below the diagonal are the correlations among constructs; SE: Service encounter; CT: Consumer Trust; IF: Loyalty.*

### Structural Model and Hypothesis Testing

After confirming the validity of the measurement model, a causal relationship model was developed to test the proposed hypotheses. According to the results obtained (see Figure 2), it is confirmed that the proposed model presents a good fit:  $\chi^2 = 177.23$ ;  $gl = 62$ ;  $\chi^2/gl = 2.85$ ;  $RMSEA = .089$  (95% CI = .07-.11);  $SRMR = .03$ ,  $CFI = .97$ ,  $TLI = .96$ ,  $NFI = .95$ . With respect to the proposed hypotheses, significant relationships were found between service encounter and consumer trust in the service ( $\beta = .79$ ;  $p < .001$ ) as well as between consumer trust in the service and user loyalty ( $\beta = .67$ ;  $p < .001$ ). However, no significant relationships were found between service encounter and user's loyalty ( $\beta = .15$ ;  $p = .08$ ). Hence, of the proposed hypothetical relationships, only H1 and H3 were supported. In addition to that, all the variables included in the model were significantly predicted by their respective indicators with a factor variance of .55 for service encounter, .36 for consumers loyalty, and .29 for consumers' trust.



Note(s): \* $p < .001$ ; SE: Service encounter; CT: Consumer Trust; IF: Loyalty.

**Figure 2.** Structural model with standardized estimates and path coefficients.

## Discussion and Conclusions

The aim of this study was to examine the impact of service encounter on fitness consumers' perceptions and

behaviors adopting the theoretical lenses of the SVF and S-D logic perspective (Vargo & Lusch, 2004; Woratschek et al., 2014). More specifically, this study developed a research model to examine the relationships between service encounter, consumer trust, and loyalty in fitness centers. Based on the results of the analysis, we reach the following conclusions about the hypothesized relationships. Firstly, service encounter had a significant impact on consumer trust. This finding extends available research evidence from previous investigations by demonstrating that service encounter in fitness centers is not only a mechanism to improve the perception of economic and utilitarian value (Wang & Chiu, 2023), but also a catalyst for the development of social and emotional value too (Sevilmiş et al., 2024).

According to the fundamental principle (FP) 7 of the SVF, "Value is always co-created by firms, customers and other stakeholders" (Woratschek et al., 2014, p.18), service encounter outstands as a clear source for value creation in fitness centers, which has been empirically demonstrated by this study and other previous investigations (Wang & Chiu, 2023). Additionally, the FP of the SVF 8 indicates that "Co-created value is always value in use" (Woratschek et al., 2014, p.18). To the authors view, this implies that intangible value generated by service encounters might be present in fitness centers through boosting a safer and more motivating atmosphere for exercising as well as by the generation of a sense of community. According to Çevik & Sevilmiş (2024), sense of community can also influence post-consumption consumer attitudes, increasing the intention to continue a membership.

These attitudes can also have positive effects for fitness users as well as managers and business owners. On the one hand, having a larger number of loyal customers influences the membership fees, which are one of the main income sources for these businesses (Çevik & Sevilmiş, 2024). Consequently, managers and business owners can clearly benefit from fostering positive service encounters in the fitness facilities as this will influence their customer retention and financial sustainability (León-Quismondo et al., 2020). In addition, those customers that are more loyal are also more prone to recommend, which can generate extra revenue opportunities (Ioannou & Melanthiou,

2015; Yi et al., 2021). On the other hand, from the customer's perspective, any member of any sport service that is more loyal is also more likely to continue exercising. This fact is very relevant as adherence to physical activity is a key element to achieve any expected physical and health results (Gjestvang et al., 2020; Sperandei et al., 2016).

Secondly, the relationship between service encounter and customer loyalty was found non-significant in this study. This finding is in contrast with previous investigations in the field which have found significant relationships between SE and other behavioral variables such as repurchase intention (Wang & Chiu, 2023). Nonetheless, this previous investigation also indicated that perceived value played a mediation effect in the relationship between SE and RI. Thus, it could be argued that due to a possible mediating effect of consumer trust on the relationship between SE and consumer loyalty, the true relationship between these variables might have been hindered. Future investigations in fitness centers should test the existence of a mediation effect between service encounter and consumer loyalty to obtain a better understanding of the relationship between these variables.

Finally, the relationship between consumer trust and loyalty was confirmed, providing further support for the relationship among these variables (Alguacil et al., 2019; Sirdeshmukh et al., 2002). On the basis of these results, the available scientific evidence on the role of daily interaction between employees and users of fitness centers in achieving trust and loyalty in the service is reinforced (Glaveli et al., 2023). In addition, the findings demonstrate that trust in the service can also lead to greater user loyalty. These findings contribute to the fitness services literature by expanding the evidence for understanding the mechanisms by which service encounter can influence members' perceptions, feelings and behavioral attitudes. This is highly relevant in this context as due to the high frequency of interaction in these facilities (Yi et al., 2021) as well as the specific set of skills required for effective service provision in this setting (Glaveli et al., 2023).

### Managerial Implications

As mentioned in the previous section, the current study contributes to research in fitness centers expanding the understanding of the mechanisms by which service encounter can influence members' perceptions and behavioral attitudes. Nonetheless, the contribution of this study is not limited to research and its results also show practical implications for managers and owners of sports organizations. Firstly, sport managers interested in measuring service encounter can use the proposed scale due to its simple wording and reduced structure. By measuring this variable, professionals can search for tangible (i.e. questions about injuries, doubts about their training programs, mood of the day) aspects of service encounter that

can be integrated in standardized protocols for reception and interaction with users. Secondly, by measuring service encounter consistently, sport managers can assess and monitor the interaction provision of their employees across different areas of the service (i.e., exercise room, SPA, group classes, etc.) and establish different incentives for staff. Finally, by measuring service encounter across large populations, both practitioners and researchers can find patterns and specific needs profiles which can be helpful to adapt the available protocols to specific target populations (e.g. elder people).

### Limitations and Future Research

Despite its theoretical and practical contributions, this study presents some limitations that should be considered when applying these findings to other populations. Firstly, it should be noted that data collection in this research was carried out by means of a convenience sample at one single point in time. On the one hand, using a convenience sampling may affect the validity of the results when applied to other populations, for this reason we recommend to use stratified sampling techniques whenever possible (Parra-Camacho et al., 2023). In addition to this, the sample size of this study was relatively low, which reinforces the need to replicate the study to support the findings of this research and strengthen available evidence. On the other hand, collecting all the data at one single point in time could create potential issues related to common method variance (CMV) (Hulland et al., 2018; Kaltsonoudi et al., 2022). However, as indicated in the methodology section of this manuscript, a series of procedural remedies and post hoc tests were performed to confirm that CMV was not a pervasive issue in this study.

Secondly, the assessment of some variables such as loyalty by means of questionnaires instead of primary data represents a limitation that may affect the validity of the results. Nevertheless, this is a limitation that is extensive across sport management research. In any case, we recommend to other researchers who want to continue investigating in this line of research to combine different types of data to maximize the validity of the results. Thirdly, the current study focused only on the face-to-face interactions that occur during the service delivery process in fitness centers. This can be considered a potential limitation as pointed out in previous investigations which argued that service encounters also encompass other types of customer interactions that happen with non-human actors (e.g. technological interactions with the fitness center through the center's application, email or social media) (Larivière et al., 2017; Wang & Chiu, 2023). For this reason, future investigations in the field might also want to consider the members' interactions with other elements on the service provision such as the fitness applications used to enroll in some centers and activities. Finally, in addition to the

previous recommendations, it is interesting that future research proposes longitudinal designs combining the measurement of some variables (e.g. service encounter) while controlling other tangible variables over time (i.e. number of leavers). Collaboration between researchers and practitioners would be crucial for this.

### Competing Interests

All the authors of this manuscript declare no conflict of interest.

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## References

- Alguacil-Jiménez, M., Núñez-Pomar, J., Pérez-Campos, C., & Prado-Gascó, V. (2019). Perceived value, satisfaction and future intentions in sport services: Putting congruence and brand trust in the equation—linear models vs QCA. *Academia Revista Latinoamericana de Administración*, 32(4), 566–579.
- Alguacil-Jiménez, M., Sánchez-García, J., & Valantine, I. (2020). Be congruent and I will be loyal: The case of sport services. *Sport in Society*, 23(2), 234–248. <https://doi.org/10.1080/17430437.2019.1607305>
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
- Andreasson, J., & Johansson, T. (2014). The Fitness Revolution: Historical Transformations in the Global Gym and Fitness Culture. *Sport Science Review*, 23(3–4), 91–112.
- Assael, H. (1992). *Consumer behavior and marketing action*. Kent.
- Azza, T. B., & Norchene, B. D. M. (2017). Social and physical aspects of the service encounter: Effects on trust and customer loyalty to the service provider. *Advances in Economics and Business*, 5(1), 1–10.
- Behnam, M., Pyun, D. Y., Doyle, J. P., & Delshab, V. (2021). The impact of consumer knowledge on profitable consumer loyalty through perceived service quality and psychological involvement in non-profit sport clubs. *International Journal of Sports Marketing and Sponsorship*, 22(2), 407–427.
- Berry, L. L., & Parasuraman, A. (1993). Building a new academic field—The case of services marketing. *Journal of Retailing*, 69(1), 13–60.
- Bodet, G. (2008). Customer satisfaction and loyalty in service: Two concepts, four constructs, several relationships. *Journal of Retailing and Consumer Services*, 15(3), 156–162.
- Brislin, R. W. (1970). Back-Translation for Cross-Cultural Research. *Journal of Cross-Cultural Psychology*, 1(3), 185–216. <https://doi.org/10.1177/135910457000100301>
- Brown, J. R., Crosno, J. L., & Tong, P. Y. (2019). Is the theory of trust and commitment in marketing relationships incomplete? *Industrial Marketing Management*, 77, 155–169.
- Buser, M., Woratschek, H., & Schönberger, J. (2022). ‘Going the extra mile’ in resource integration: Evolving a concept of sport sponsorship as an engagement platform. *European Sport Management Quarterly*, 22(4), 548–568. <https://doi.org/10.1080/16184742.2020.1820061>
- Campos, F., ML Martins, F., Simões, V., & Franco, S. (2017). Fitness participants perceived quality by age and practiced activity. *Journal of Physical Education and Sport*, 17(3), 698–704.
- Çevik, H., & Sevilmiş, A. (2024). The effects of sense of community on perceived value, consumer satisfaction and future intention in the low-cost fitness clubs. *Managing Sport and Leisure*, 29(5), 830–850. <https://doi.org/10.1080/23750472.2022.2115393>
- Chelladurai, P., & Chang, K. (2000). Targets and standards of quality in sport services. *Sport Management Review*, 3(1), 1–22.
- Chiu, W., Cho, N.-H., & Won, D. (2014). The effects of internal marketing on job satisfaction and organizational commitment in Taipei sports centers. *Journal of Global Scholars of Marketing Science*, 24(2), 206–222. <https://doi.org/10.1080/21639159.2014.881609>
- Chiu, W., Won, D., & Bae, J. (2019). Customer value co-creation behaviour in fitness centres: How does it influence customers’ value, satisfaction, and repatronage intention? *Managing Sport and Leisure*, 24(1–3), 32–44. <https://doi.org/10.1080/23750472.2019.1579666>
- Chiu, W., Won, D., & Bae, J. (2020). Internal marketing, organizational commitment, and job performance in sport and leisure services. *Sport, Business and Management: An International Journal*, 10(2), 105–123.
- Daigo, E., & Filo, K. (2022). Exploring the value sponsors co-create at a charity sport event: A multiple stakeholder perspective of sport value. *Sport Management Review*, 25(4), 656–678. <https://doi.org/10.1080/14413523.2021.1975401>
- Delia, E. B., Melton, E. N., Sveinson, K., Cunningham, G. B., & Lock, D. (2022). Understanding the lack of diversity in sport

- consumer behavior research. *Journal of Sport Management*, 36(3), 265–276.
- Dick, A. S., & Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework. *Journal of the academy of marketing science*, 22, 99–113.
- Doyle, J., Filo, K., Thomson, A., & Kunkel, T. (2021). Large-scale sport events and resident well-being: Examining PERMA and the Gold Coast 2018 Commonwealth Games. *Journal of Sport Management*, 35(6), 537–550.
- EuropeActive & Deloitte (2024). *European Health & Fitness Market Report 2024*. Available at <https://europeactive.blackbox-publishers.com/en/publications/ehfmr-deloitte-europeactive/european-health-fitness-market-report-2024>
- Ferreira-Barbosa, H., Garcia-Fernandez, J., & Cepeda-Carrion, G. (2020). The Influence of Technologies on Members' Retention by Gyms: A Systematic Review. *Movimento*, 26, Article e26070. <https://doi.org/10.22456/1982-8918.100316>
- Ferreira-Barbosa, H., Sabino, B., Loureiro, V., & Cepeda-Carrion, G. (2024). Perceived value, service quality and service convenience on behavioral intentions in fitness centers: A comparison between customers with and without personal training. *International Journal of Sports Marketing and Sponsorship*, Vol. ahead-of-print, No. ahead-of-print. <https://doi.org/10.1108/IJSMS-09-2024-0226>
- Font, X., English, R., Gkritzali, A., & Tian, W. S. (2021). Value co-creation in sustainable tourism: A service-dominant logic approach. *Tourism Management*, 82, Article 104200.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Franco, S., da Costa-Simões, V. A., Santos-Rocha, R., Vieira, I., Ramalho, F., & Ramos, L. R. (2024). Tendências do Fitness em Portugal para 2024. *Retos: Nuevas Tendencias en Educación Física, Deporte y Recreación*, 57, 88–100.
- García-Fernández, J., & Gálvez-Ruiz, P. (2021). *The Global Private Health & Fitness Business: A Marketing Perspective*. Emerald Publishing Limited. <https://www.emerald.com/insight/content/doi/10.1108/978-1-80043-850-720211004/full/html>
- García-Fernández, J., Gálvez-Ruiz, P., Fernández-Gavira, J., Vélez-Colón, L., Pitts, B., & Bernal-García, A. (2018). The effects of service convenience and perceived quality on perceived value, satisfaction and loyalty in low-cost fitness centers. *Sport Management Review*, 21(3), 250–262.
- García-Pascual, F., Parra-Camacho, D., & Aguado-Berenguer, S. (2023). Effect of service experience, engagement and satisfaction on the future intentions of customers of a sports services. *Heliyon*, 9(7), Article e17850. <https://doi.org/10.1016/j.heliyon.2023.e17850>
- Gerke, A., Woratschek, H., & Dickson, G. (2020). The sport cluster concept as middle-range theory for the sport value framework. *Sport Management Review*, 23(2), 200–214.
- Gjestvang, C., Abrahamsen, F., Stensrud, T., & Haakstad, L. A. H. (2020). Motives and barriers to initiation and sustained exercise adherence in a fitness club setting—A one-year follow-up study. *Scandinavian Journal of Medicine & Science in Sports*, 30(9), 1796–1805. <https://doi.org/10.1111/sms.13736>
- Glaveli, N. (2021). Two Countries, Two Stories of CSR, Customer Trust and Advocacy Attitudes and Behaviors? A Study in the Greek and Bulgarian Telecommunication Sectors. *European Management Review*, 18(1), 151–166. <https://doi.org/10.1111/emre.12417>
- Glaveli, N., Papadimitriou, D., Karagiorgos, T., & Alexandris, K. (2023). Exploring the role of fitness instructors' interaction quality skills in building customer trust in the service provider and customer satisfaction. *European Sport Management Quarterly*, 23(3), 767–788. <https://doi.org/10.1080/16184742.2021.1928256>
- Gruner, K. E., & Homburg, C. (2000). Does customer interaction enhance new product success? *Journal of business research*, 49(1), 1–14.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Homburg, C., & Giering, A. (2001). Personal characteristics as moderators of the relationship between customer satisfaction and loyalty? An empirical analysis. *Psychology and Marketing*, 18(1), 43–66. [https://doi.org/10.1002/1520-6793\(200101\)18:1<43::AID-MAR3>3.0.CO;2-I](https://doi.org/10.1002/1520-6793(200101)18:1<43::AID-MAR3>3.0.CO;2-I)
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53–60.
- Hsieh, Y.-H., & Chuang, I.-C. (2020). Evaluation of key factors for service experience: A comparison of tourism factories and international tourism hotels. *Tourism Economics*, 26(3), 404–436. <https://doi.org/10.1177/1354816619840099>
- Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Hulland, J., Baumgartner, H., & Smith, K. M. (2018). Marketing survey research best practices: Evidence and recommendations from a review of JAMS articles. *Journal of the Academy of Marketing Science*, 46(1), 92–108. <https://doi.org/10.1007/s11747-017-0532-y>
- Ioannou, M., & Melanthiou, Y. (2015). The effect of interaction quality on trust, loyalty and cross-selling. *International Economics Letters*, 4(1), 1–14.
- Jones, C. W., & Byon, K. K. (2020). Central actors in the live sport event context: A sport spectator value perception model. *Sport, Business and Management: An International Journal*, 10(1), 58–81.
- Kaltsonoudi, K., Tsigilis, N., & Karteroliotis, K. (2022). Critical Review of the Literature and Current Tendencies of the Common Method Variance in Sport Management Research. *Measurement in Physical Education and Exercise Science*, 26(2), 103–115. <https://doi.org/10.1080/1091367X.2021.1949322>

- Kim, M. (2022). How can I Be as attractive as a Fitness YouTuber in the era of COVID-19? The impact of digital attributes on flow experience, satisfaction, and behavioral intention. *Journal of Retailing and Consumer Services*, 64, Article 102778.
- Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford Publications.
- Kuo, Y.-F., Wu, C.-M., & Deng, W.-J. (2009). The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services. *Computers in Human Behavior*, 25(4), 887–896.
- Larivière, B., Bowen, D., Andreassen, T. W., Kunz, W., Sirianni, N. J., Voss, C., Wunderlich, N. V., & De Keyser, A. (2017). “Service Encounter 2.0”: An investigation into the roles of technology, employees and customers. *Journal of Business Research*, 79, 238–246.
- León-Quismondo, J., García-Unanue, J., & Burillo, P. (2020). Best practices for fitness center business sustainability: A qualitative vision. *Sustainability*, 12(12), Article 5067.
- Lin, C. (2019). How does perceived retail service innovativeness affect retail patronage intentions? *Creativity and Innovation Management*, 28(4), 519–532. <https://doi.org/10.1111/caim.12333>
- Loranca-Valle, C., Cuesta-Valiño, P., Núñez-Barriopedro, E., & Gutiérrez-Rodríguez, P. (2021). Management of loyalty and its main antecedents in sport organizations: A systematic analysis review. *Frontiers in Psychology*, 12, Article 783781.
- MacIntosh, E., & Law, B. (2015). Should I stay or should I go? Exploring the decision to join, maintain, or cancel a fitness membership. *Managing Sport and Leisure*, 20(3), 191–210. <https://doi.org/10.1080/23750472.2015.1025093>
- Mahony, D. F., Madrigal, R., & Howard, D. (2000). Using the psychological commitment to team (PCT) scale to segment sport consumers based on loyalty. *Sport Marketing Quarterly*, 9(1), 15–25.
- Morgan, R. & Hunt, S. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58, 20–38.
- Nguyen, H. S. (2024). The impact of value co-creation behavior on customer loyalty in the service domain. *Heliyon*, 10(9), Article e30278. <https://doi.org/10.1016/j.heliyon.2024.e30278>
- Nuviala-Nuviala, A. N., García-Fernández, J., Bernal-García, A., Grao-Cruces, A., Teva-Villén, M. R., & Pérez-Ordás, R. (2014). Adaptación y validación de la escala de intenciones futuras de comportamiento en usuarios de servicios deportivos. *Universitas Psychologica*, 13(3), 1071–1082. <https://doi.org/10.11144/Javeriana.UPSY13-3.avei>
- Parra-Camacho, D., González-Serrano, M. H., Jiménez, M. A., & Jiménez-Jiménez, P. (2023). Analysis of the contribution of sport events to sustainable development: Impacts, support and resident’s perception. *Heliyon*, 9(11), Article e22033. <https://doi.org/10.1016/j.heliyon.2023.e22033>
- Paschalidou, K., Tsitskari, E., Alexandris, K., Karagiorgos, T., & Filippou, D. (2023). Segmenting Fitness Center Customers: Leveraging Perceived Ethicality for Enhanced Loyalty, Trust, and Word-of-Mouth Communication. *Sustainability*, 15(22), Article 22. <https://doi.org/10.3390/su152216131>
- Pedragosa, V., & Ferreira, A. (2025). *Barómetro do fitness em Portugal 2024*. Edições: AGAP.
- Pedragosa, V., & Ferreira, A. (2024). *Barómetro do fitness em Portugal 2023*. Edições: AGAP.
- Pedragosa, V., Cardadeiro, E., & Santos, A. (2023). *Barómetro do fitness em Portugal 2022*. Edições: AGAP.
- Ramaswamy, V., & Ozcan, K. (2018). What is co-creation? An interactional creation framework and its implications for value creation. *Journal of Business Research*, 84, 196–205.
- Sandell, M., & Lagrosen, S. (2015). Health and Fitness Marketing—The Role of Relationships and Trust. In C. L. Campbell (Ed.), *Marketing in Transition: Scarcity, Globalism, & Sustainability* (pp. 62–66). Springer International Publishing. [https://doi.org/10.1007/978-3-319-18687-0\\_29](https://doi.org/10.1007/978-3-319-18687-0_29)
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2022). Partial Least Squares Structural Equation Modeling. In C. Homburg, M. Klarmann, & A. Vomberg (Eds), *Handbook of Market Research* (pp. 587–632). Springer International Publishing. [https://doi.org/10.1007/978-3-319-57413-4\\_15](https://doi.org/10.1007/978-3-319-57413-4_15)
- Sato, M., Jordan, J. S., & Funk, D. C. (2016). A distance-running event and life satisfaction: The mediating roles of involvement. *Sport Management Review*, 19(5), 536–549.
- Sevilmiş, A., Özdemir, İ., García-Fernández, J., & Zhang, J. J. (2024). Development of a Multidimensional Scale for Measuring the Perceived Value of a Fitness Service. *Journal of Global Sport Management*, 1–23. <https://doi.org/10.1080/24704067.2024.2317122>
- Sharma, S., Mukherjee, S., Kumar, A., & Dillon, W. R. (2005). A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. *Journal of business research*, 58(7), 935–943.
- Sirdeshmukh, D., Singh, J., & Sabol, B. (2002). Consumer Trust, Value, and Loyalty in Relational Exchanges. *Journal of Marketing*, 66(1), 15–37. <https://doi.org/10.1509/jmkg.66.1.15.18449>
- Sperandei, S., Vieira, M. C., & Reis, A. C. (2016). Adherence to physical activity in an unsupervised setting: Explanatory variables for high attrition rates among fitness center members. *Journal of Science and Medicine in Sport*, 19(11), 916–920. <https://doi.org/10.1016/j.jsams.2015.12.522>
- Surprenant, C. F., & Solomon, M. R. (1987). Predictability and Personalization in the Service Encounter. *Journal of Marketing*, 51(2), 86–96. <https://doi.org/10.1177/002224298705100207>
- Thompson, W. R. (2022). Worldwide survey of fitness trends for 2022. *ACSM’s Health & Fitness Journal*, 26(1), 11–20.
- Trombert, A. R. (2015). La Declaración de Helsinki de Fortaleza (Brasil) 2013: Avances, retrocesos y retos pendientes. (A declaração de helsinki de fortaleza (brasil) 2013: avanços, recuos e futuros desafios.). *Revista Binacional Brasil-Argentina: Diálogo entre as ciências*, 4(1), 207–229.
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, 68(1), 1–17. <https://doi.org/10.1509/jmkg.68.1.1.24036>
- Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1–10. <https://doi.org/10.1007/s11747-007-0069-6>

- Vila-López, N., Küster-Boluda, I., & Aldás-Manzano, J. (2000). *Desarrollo y validación de escalas de medida en marketing*. Servei de Publicacions, Facultat de Ciències Econòmiques i Empresariales, Universitat de València.
- Wang, F. J., & Chiu, W. (2023). Service encounter and repurchase intention in fitness centers: Perceived value as a mediator and service innovativeness as a moderator. *International Journal of Sports Marketing and Sponsorship*, 24(1), 145–167.
- Wilkie, W. L. (1994). Consumer learning. *Consumer Behavior* (3rd ed., pp. 259–262). John Wiley and Sons, Inc.
- Woratschek, H., Horbel, C., & Popp, B. (2014). The sport value framework – a new fundamental logic for analyses in sport management. *European Sport Management Quarterly*, 14(1), 6–24. <https://doi.org/10.1080/16184742.2013.865776>
- Xu, J. B., Yan, L., & Mak, C. K. (2021). Service encounter failure, negative destination emotion and behavioral intention: An experimental study of taxi service. *Tourism Management Perspectives*, 40, Article 100886.
- Yi, S., Lee, Y. W., Connerton, T., & Park, C.-Y. (2021). Should I stay or should I go? Visit frequency as fitness centre retention strategy. *Managing Sport and Leisure*, 26(4), 268–286. <https://doi.org/10.1080/23750472.2020.1763829>
- Yoshida, M., & James, J. D. (2010). Customer satisfaction with game and service experiences: Antecedents and consequences. *Journal of sport management*, 24(3), 338–361.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The Behavioral Consequences of Service Quality. *Journal of Marketing*, 60(2), 31–46. <https://doi.org/10.1177/002224299606000203>



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## Appendix 1

| Dimensions        | Items                                                                                                                                                                                                     | References              |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Service encounter | SE1<br>The interaction quality with this fitness center is higher than others<br><i>A qualidade das interações entre os membros e os colaboradores neste Centro de Fitness é melhor do que nos outros</i> | Gruner & Homburg (2000) |
|                   | SE2<br>The staff of this fitness center frequently interacts with me<br><i>Os colaboradores deste Centro de Fitness interagem frequentemente comigo</i>                                                   |                         |
|                   | SE3<br>The frequency of encounters with fitness staff is high<br><i>A frequência das interações entre os membros e os colaboradores deste Centro de Fitness são elevadas</i>                              |                         |
|                   | SE4<br>The number of fitness staff with whom I interact is high<br><i>O número de colaboradores com que interajo no Centro de Fitness é elevado</i>                                                       |                         |
| Consumer trust    | CT1<br>I feel I can trust my fitness center<br><i>Sinto que posso confiar no meu Centro de Fitness</i>                                                                                                    | Morgan (1994)           |
|                   | CT2<br>This fitness center is truly sincere in its promises<br><i>Este Centro de Fitness é realmente sincero nas suas promessas</i>                                                                       |                         |
|                   | CT3<br>This fitness center treats me fairly and justly<br><i>Este Centro de Fitness trata-me de forma justa e equitativa</i>                                                                              |                         |
|                   | CT4<br>This fitness center is honest and truthful with me<br><i>Este Centro de Fitness é honesto e sincero comigo</i>                                                                                     |                         |

| Dimensions | Items                                                                                                                                                                                                                                 | References                |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Loyalty    | IF1<br>I will recommend this fitness center to my friends and family<br><i>Recomendarei aos meus amigos e familiares que frequentem este Centro de Fitness</i>                                                                        | Zeithaml et al.<br>(1996) |
|            | IF2<br>If other people ask me, I will speak positively about this fitness center<br><i>Falarei agradavelmente sobre este Centro de Fitness a outras pessoas se me perguntarem</i>                                                     |                           |
|            | IF3<br>I will encourage my friends and family to do sports activities in this fitness center<br><i>Incentivarei outras pessoas a virem a este Centro de Fitness</i>                                                                   |                           |
|            | IF4<br>I will consider this fitness center my first choice for any sports services I may need<br><i>Considerarei este Centro de Fitness como a minha primeira escolha para quaisquer serviços desportivos de que possa necessitar</i> |                           |
|            | IF5<br>In the coming years, I will be doing more sports activities in this fitness center<br><i>Nos próximos anos, irei praticar mais atividades desportivas neste Centro de Fitness</i>                                              |                           |